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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,905	03/31/2004	Jun Hyung Park	LT-0056	4976
34610	7590	02/13/2008		
KED & ASSOCIATES, LLP P.O. Box 221200 Chantilly, VA 20153-1200			EXAMINER BAE, JI H	
			ART UNIT 2115	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary

Application No.

10/812,905

Applicant(s)

PARK ET AL.

Examiner

Ji H. Bae

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 16-18, 21 and 59-61 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13, 16-18, 21 and 59-61 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1-22-2008, 9-4-2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

Applicant's arguments, see applicant's remarks pp. 9-14, filed on 20 November 2007, with respect to the rejection(s) of claim(s) 1, 3-4, 6 and 9 under 35 U.S.C. 102(e) and claims 2, 7, 8, and 10-23 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of newly found prior art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yen et al. U.S. Patent No. 6,711,004 B2, in view of Hirayama et al., U.S. Patent Application Publication No. 2002/0198006 A1, and also in view of Shimano, U.S. Patent No. 6,771,494 B2.

Regarding claim 1, Yen teaches:

a portable computer unit [Fig. 2, notebook computer] having a configuration that allows a system mode to be switched between a notebook computer mode and a tablet computer mode [Fig. 10]; and

a controller configured to determine the configuration of the portable computer unit [col. 6, lines 28-34, control switches 31 and 41] responsive to a system power supply of the portable computer being turned on [col. 3, lines 1-16, computer is activated and status of first/second

switches are checked], wherein the controller operates an application program for the tablet computer mode or the notebook computer mode according to the determination [col. 3, lines 1-6, applications operated in tablet/notebook mode, col. 6, lines 65-67, simulating a PDA].

Yen does not teach a rotation detection switch to provide a rotation detection signal having a first or second state, and used to recognize a notebook or tablet computer mode depending on the state of the rotation detection signal. Yen also does not teach inactivation of a keyboard when a tablet computer mode is recognized.

Hirayama teaches a portable information terminal with a rotational display component attached to a control component [Fig. 1-4]. Hirayama further teaches that the terminal possesses a rotational position detection sensor which provides rotational position detection signal to the terminal, which then enable a function corresponding to the position of the display component [paragraph 62 and 63].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Yen with Hirayama by implementing a rotational position detection sensor as taught by Hirayama in the system of Yen. Yen teaches a computer system that is operable in both a tablet mode or notebook mode [Fig. 2, 4, 5, and 10]. Although Yen teaches a display component that can be rotated according to the desired mode, Yen does not explicitly disclose a causal relationship between the rotations of the screen and the selection of the tablet or notebook mode (i.e. although the screen can be rotated for use in a tablet mode, it does not actually activate or select the tablet mode). Instead, Yen teaches that the desired mode is selected based on the actuation of two switches [col. 3, lines 10-17], rather than being based on the position of the screen. Hirayama teaches that manual manipulation of various keys of a portable terminal in order to enable a particular functional mode is representative of prior art implementations [paragraph 6], and that the invention disclosed by Hirayama represents an

improvement because the rotational state of the display component automatically selects the functional mode corresponding to the position of the display [paragraphs 14 and 79]. Thus, one of ordinary skill in the art would have been motivated to combine the inventions based on Hirayama's disclosure that automatic selection of the mode based on a detected rotational position of the display is simpler and preferable to manual selection.

Additionally, it would have been obvious to one of ordinary skill in the art to combine the teachings of Yen with Shimano by disabling the keyboard of Yen when operating in a tablet mode, as suggested by Shimano. Shimano teaches a portable computer system capable of operating in either a laptop mode or a tablet mode [col. 3, lines 58-60]. While operating in a tablet mode, the keyboard and other "primary input devices" (i.e. pointing device, col. 4, line 34-36) are disabled [col. 4, lines 4-14, col. 8, lines 30-37].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Yen and Shimano by implementing the selective input device enablement taught by Shimano in the portable computer of Yen. Both Yen and Shimano are directed towards portable computer systems that are operable in both a laptop configuration and tablet configuration. Yen's teachings are primarily concerned with determining the desired operation mode depending on the physical configuration of the computer. Once the desired mode is determined, certain configuration steps are carried out [col. 6, lines 49-64], including configuring input devices [lines 60-62].

Shimano teaches that in portable computers operable in both laptop and tablet modes, users desire the enabling of input devices suitable to the particular mode [col. 1, lines 46-51]. Shimano further teaches that it is desirable to disable input from the keyboard and pointing devices while in tablet mode [software lockout prevents input, col. 8, lines 34-37] so as to prevent damage and errant inputs [col. 10, lines 47-55]. Therefore, it would have been obvious

to combine Shimano with Yen based on Yen's suggestion to configure input devices depending on mode, and Shimano's teaching that selective enablement of input devices based on mode is desired by users, and that it would prevent damage and errant inputs.

Regarding claim 3, Yen teaches a portable computer with a display module whose rotation state allows the system mode to be switched between the notebook mode and tablet mode [Fig. 2, 4, 5, and 10].

Regarding claim 6, Yen teaches that the first controller is a BIOS [Fig. 6 and 7, BIOS 622].

Regarding claim 9, Yen teaches that the controller determines a physical configuration of the portable computer unit [tablet or notebook mode, based on screen position and switch actuation].

Claims 2, 7, 8, 10, 13, 16, 17, 21, and 59-61 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yen/Hirayama/Shimano in view of Du et al., U.S. Patent Application Publication No. 2003/0188144 A1. The Du reference has a filing date of March 28, 2002 and was cited in the previous office action, but not applied towards the rejection.

Regarding claims 2, 7, and 8 Yen teaches a computer system capable of operating in either a notebook mode or tablet mode, and operating an application program in the notebook mode or tablet mode accordingly, but does not explicitly teach loading a different OS corresponding to a table mode or a notebook mode.

Du teaches a computer system that is capable of operating in either a normal PC mode or a personal digital assistant (PDA) mode. The system of Du loads a different OS depending on which mode is desired [Fig. 5, MiniOS and Windows, paragraph 18].

It would have been obvious to one of ordinary skill in the art to combine the teachings of Yen with Du by modifying Yen to load a different OS for tablet/PDA mode and notebook mode, as taught by Du. Both Yen and Du teach computer systems capable of operating in either a normal PC mode and a PDA mode, with the tablet configuration of Yen providing a PDA functionality. Du teaches that the MiniOS for PDA functionality can be booted much more quickly than the full OS for normal PC functionality [paragraph 19]. Therefore, the motivation to combine Du with Yen comes from Du's teaching that a smaller OS for PDA functionality would be advantageous over booting a standard OS to access PDA functionality. The reduced boot times would make Du's MiniOS preferable to booting a standard OS for PDA mode. In combining Du with Yen, the MiniOS would be booted upon determining that the computer is operating in a tablet mode, since the tablet mode of Yen is used to access PDA functionality.

Regarding claims 10, 13, 16, 17, 21, and 59-61, Yen/Hirayama/Shimano/Du teaches the apparatus, method, and machine-readable storage medium with instructions that carry out the functionality of claims 1-3 and 6-9.

Regarding claims 4, 5, 11, 12, and 18, it would have been obvious to one of ordinary skill in the art to detect the rotation state based upon mechanical contact with a switch. Official notice is taken that laptop computers have ordinarily used switches to detect whether a laptop screen is open or closed, and initiated an operation based on the detection. Additionally, official notice is taken that the various controllers recited are ordinarily components of a computer system which handle miscellaneous support functions, and therefore it would have been obvious to enable such a component to perform the steps recited in the claims.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ji H. Bae whose telephone number is 571-272-7181. The examiner can normally be reached on Monday-Friday, 10 am to 6:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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